

## **Historic, archived document**

Do not assume content reflects current scientific knowledge, policies, or practices.



dQK79  
.U5M3  
Copy 4

AD-33 Bookplate  
(1-43)

NATIONAL

AGRICULTURAL



LIBRARY

AN EXHIBITION OF WILDFLOWERS GATHERED IN COLONIAL  
MARYLAND ON DISPLAY AT THE NATIONAL AGRICULTURAL  
LIBRARY, BELTSVILLE - 14 MARCH TO 1 APRIL 1983

C. Rose Broome  
Plant Variety Protection Office,  
AMS, USDA, Beltsville, Md.

In 1696, when Maryland was a British crown colony and William III was on the throne, Annapolis was a city only seven years of age and fewer than 40 buildings strong. In that year the young Reverend Hugh Jones arrived from London to assume a ministerial position for the Church of England, and to collect specimens of plants, animals, fossils, and other objects of natural history. The Royal Society of London, a body of the finest scientists in the British Isles, were hungry for knowledge of the biological resources of the New World. That hunger had been amply whetted by the wonders that had reached them from the collections of John Banister in Virginia during the prior decade.

Hugh Jones had little background in the biological sciences, but when he was selected for his ecclesiastical duties by the Bishop of London, Henry Compton, he was also given a "crash" course in natural science by learned men at Oxford University and by the Bishop himself, who was a member of the Royal Society, and who maintained one of the finest gardens in England.

After John Banister's death in 1692, the Royal Society placed a high priority on replacing that Virginia-based naturalist with another collector who would supply them with novelties from North America. Since naturalists working far from home had to be supported financially, it was often Bishop Compton who provided a paid position for a minister-naturalist in the colonies (a fitting tribute to the bishop's contributions to botany is the genus *Comptonia* - the sweet fern - a Maryland plant shown in this exhibit). Hugh Jones was by no means the equal of a John Banister, but he was available and willing and as a result he became Maryland's first known naturalist.

Governor Francis Nicholson welcomed young Jones to Annapolis on a hot August day in 1696.

Five weeks later Jones was sent to assume a position as rector of Christ Church Parish, a wealthy and populous tobacco-growing region on the peninsula which is now Calvert County, bounded by the Chesapeake Bay on the east, and the lower Patuxent River on the west.

Much of Jones time was occupied by his ministry to the parish, but still he found moments to seek out specimens to send to his new scientific friends. The first two boxes of specimens arrived in London in 1697 and were received by the prominent naturalist James Petiver. More followed in 1698. The Reverend Hugh Jones continued to send material to London until he was incapacitated by tuberculosis in 1699. He died in Maryland in early 1702.

In 1698 two other naturalists came to Maryland. William Vernon was a fellow of St. Peter's College, Cambridge, who was also sponsored by Governor Nicholson and the Royal Society of London. Dr. David Krieg, a ship's surgeon, naturalist, artist, and friend of James Petiver arrived independently. These two men spent only the growing season of 1698 in Maryland, but their excellent collections are far more numerous than those of Jones.

As a result of the activities of Jones, Krieg, and Vernon the gardens of kings, bishops and landed gentry in Europe became greatly enriched, and scientists such as James Petiver, Leonard Plukenet and John Ray described many species from Maryland in the technical literature as new to science. The very first scientific paper dealing exclusively with Maryland natural history was published in 1698, entitled "Remarks by Mr. James Petiver, Apothecary, and Fellow of the Royal Society, on some Animals, Plants, &c. sent to him from Maryland, by the Reverend Hugh Jones." More than 50 species of flowering plants and ferns were discussed, and many were described for the first time.

These Maryland plants subsequently came to the attention of Carl Linnaeus, the famed Swedish naturalist who revolutionized the science of plant and animal classification and naming. Many were included in Linnaeus's landmark book, *Species*

*Plantarum*, published in 1753. Linnaeus, who developed a new and simplified system of nomenclature, shortened the original lengthy phrase-names that had been given these plants by earlier authors, to two words - the name of the genus followed by an adjective, often descriptive of some distinctive feature of the species, or taken from the name of a person or place.

Unfortunately, Linnaeus never saw most of the original plant specimens collected by the first three Maryland naturalists. Instead he took descriptions of the species they represent from the published literature, or he saw specimens of those species in gardens or sent by later collectors. Linnaeus cites Petiver, Plukenet, and Ray copiously, and he mentioned Maryland as the origin of about 100 species. Nine of these species he named "*mariannum*" or "*marilandicum*" in honor of the Colony in which they were first collected. *Clitoria mariana* was the name Linnaeus chose for the Maryland butterfly-pea, a species originally named *Clitorius Marianus trifoliatus subitus glaucus* by James Petiver in 1704.

Although Linnaeus had no first-hand knowledge of Maryland's early naturalists, he honored two of them by naming a genus of dwarf dandelion-like plants *Krigia* (a specimen is in this exhibit), after David Krieg, and the genus of ironweeds he called *Vernonia*, for William Vernon. For some reason no American plants were ever named in honor of Hugh Jones, Maryland's first collector.

The specimens of Jones, Krieg and Vernon were saved and became incorporated into the vast collections of the British Museum (Natural History) in London when it was founded in the 18th century. There they remained, the vast majority of them unidentified or labeled only with the old, pre-Linnaean phrase name, bound in huge books and filed in the historic Sloane collection.

Several years ago Professor James L. Reveal of the University of Maryland was shown these volumes of North American plants by a member of the museum's curatorial staff. Dr. Reveal recognized familiar species which were labelled only "Maryland" and "Krieg," "Vernon," "Jones," and became very excited indeed. He realized he was

probably looking at the very earliest plant specimens from his own State.

Reveal was able to obtain funds from the National Science Foundation, the University of Maryland, and the U. S. Fish & Wildlife Service to pursue a study of the British collections and the pioneering men who made them. He put together a team consisting of Dr. Melvin Brown, a co-author of the only modern-day flora of Maryland; Dr. George F. Frick, a historian from the University of Delaware; and myself. We were able to travel to England to study and identify collections of the three early naturalists at the British Museum and the University of Oxford. We also examined unpublished correspondence and records for information on these little-known men.

We found that the approximately 3000 specimens of ferns, wildflowers, shrubs, and trees we studied - all collected prior to 1700 - could be classified into over 500 species. We have identified each with its "modern" binomial (scientific name). Our historical and botanical findings will soon be published in a series of articles to appear in *Huntia*, a journal of botanical history.

Inasmuch as 1984 is the 350th anniversary of the European settlement of Maryland, an exhibition was arranged of many of the actual Jones, Krieg and Vernon plant collections. For the first time in 285 years, these priceless plants are coming home, albeit briefly, from their long stay in England. Both the British Museum (Natural History) and the University of Oxford are lending specimens for the exhibition, which is being held during March and April.

The exhibit opened at the University of Maryland, College Park, and was there on March 7 and 8. On March 9 it traveled to Christ Church in Calvert County, where Hugh Jones was rector, and which served as a base for his botanical activities as well. A flowering cherry tree (*Prunus x subhirtella*), donated by the National Arboretum in Washington, D.C. was planted on the church grounds in Jones's memory. This tree was propagated from Japanese flowering cherries introduced to this country and originally grown on the estate of

David Fairchild, the first great U.S.D.A. plant explorer. Fairchild was instrumental in bringing the original trees to Washington, D.C. where they have graced the city's tidal basin for many years. It seems particularly fitting that we are able to honor Maryland's first plant explorer by this living tribute from the hand of one of the first plant explorers sent from the United States into other lands.

The wildflower exhibition was displayed at the Maryland State House in Annapolis on March 10 and 11. From March 14 through April 1, the Oxford plant specimens and all the rare documents and illustrations will be displayed at NAL, coordinated by historian and archivist Dr. Alan Fusonie. These same materials will then go to the William Paca Garden, Annapolis, from April 4 through May 1, 1983, and will be featured in the Annapolis May Day garden tour.

A number of the plant species represented here represent species which are now rare or extinct in Maryland, such as the lovely swamp-pink (*Helonias bullata*), the chaff-seed (*Schwalbea americana*), the walking-fern (*Camptosorus rhizophyllus*) and the dragon's-mouth orchid (*Arethusa bulbosa*). Also on exhibit are the first Maryland collections of two of the plant species most vital to the colonial economy - tobacco (*Nicotiana tabacum*) and sassafras (*Sassafras albidum*). There is even a specimen of crabgrass (*Digitaria sanguinalis*), proof positive that even at this early date, European weed species had become established in the New World.

These plants are a valuable sampling of the indigenous flora of a region which, in the nearly three centuries since they lived, has experienced so much change that it can never be as before. How indebted we are to those first men of science in eastern North America who have preserved a small glimpse of the past for us to ponder and enjoy. We should also be grateful for the institutions responsible for the care and protection of these priceless records of our country's past, both the samples of her flora, and these early writings which were based on them. They are truly an eloquent "natural history" of the land.

## CATALOGUE OF EXHIBIT

1. LEONARD FUCHS (1501-1566). *De historia stirpium commentarii insignes.* 1542.
2. JOHN GERARD (1545-1612). *The herball, or generall historie of plantes...amended by Thomas Johnson.* 1633.
3. JOHN BANISTER (1650-1692). "Catalogo", in *John Ray, Historia plantarum.* 1688.
4. JOHN RAY (1628-1705). Engraving.
5. LEONARD PLUKENET (1641-1706). *Phytographia sive stirpium...icones.* 1691-1696 (1769 *Opera secundo excusum reprint*).
6. LEONARD PLUKENET. Engraving.
7. HUGH JONES (1671-1702), in J.E. Dandy, *The Sloane herbarium.* 1958.
8. JAMES PETIVER (1663?-1718). "Remarks by Mr. James Petiver...on some animals, plants, &c. sent to him from Maryland, by the Reverend Mr. Hugh Jones." *Philosophical Transactions* 20:393-406. 1698.
9. Minutes, Vestry of Christ Church Parish.
10. First letter from Hugh Jones to James Petiver.
11. Last letter from Hugh Jones to James Petiver.
12. Last will and testament of Hugh Jones.
13. ROBERT MORISON (1620-1683). *Plantarum historiae universalis oxoniensis...pars tertia,* 1699, by JACOB BOBART (1641-1719).
14. LEONARD PLUKENET (1641-1706). *Almagesti botanici mantissa.* 1700.
15. JAMES PETIVER (1663?-1718). *Gazophylacii naturae & artis decas prima.* 1702.
16. JOHN RAY (1628-1705). *Historiae plantarum... Supplementum.* 1704.
17. Three major JOHN RAY publications.
18. SIR HANS SLOANE (1660-1753). Engraving.
19. A 1699 letter from Ray to Sloane, in E. Lantester, *Correspondence of John Ray.* 1848.
20. BELLWORT [*Uvularia perfoliata* L.]
21. BLAZING-STAR [*Chamaelirium luteum* (L.) A. Gray]
22. BROAD-LEAVED IRONWEED [*Vernonia glauca* (L.) Willd.]
23. BUFFALO CLOVER [*Trifolium reflexum* L.]
24. BUR MARIGOLD [*Bidens laevis* (L.) B.S.P.]
25. CANADIAN LOUSEWORT [*Pedicularis canadensis* L.]
26. CAROLINA RUELLIA [*Ruellia carolinensis* (Walter) Steudel ssp. *ciliosa* (Pursh) R.W. Long]
27. CHAFF-SEED [*Schwalbea americana* L.]
28. CINNAMON-FERN [*Osmunda cinnamomea* L.]

29. CRAB-GRASS [*Digitaria sanguinalis* (L.) Scop.]  
30. EBONY SPLEENWORT [*Asplenium platyneuron* (L.) Oakes]  
31. FETTER-BUSH [*Leucothoe racemosa* (L.) A. Gray]  
32. FLOWERING SPURGE [*Euphorbia corollata* L.]  
33. HAWTHORN [*Crataegus crus-galli* L.]  
34. HORSEMINT [*Monarda punctata* L.]  
35. INTERRUPTED FERN [*Osmunda claytoniana* L.]  
36. KRIEG'S DWARF DANDELION [*Krigia virginica* (L.) Willd.]  
37. LEATHER-LEAF [*Chamaedaphne calyculata* (L.) Moench]  
38. LIZARD'S-TAIL [*Saururus cernuus* L.]  
39. MARYLAND BUTTERFLY-PEA [*Clitoria mariana* L.]  
40. MARYLAND GOLDEN ASTER [*Chrysopsis mariana* (L.) Elliott]  
41. OX-EYE [*Kallias helianthoides* (L.) Reveal & Broome, ined.]  
42. PLANTAIN [*Plantago* cf. *rugelii* Dcne.]  
43. PLUKENET'S UMBRELLA-SEDGE [*Cyperus plukenetii* Fernald]  
44. RICHWEED [*Collinsonia canadensis* L.]  
45. ROSE-PINK [*Sabatia angularis* (L.) Pursh]  
46. SAMPSON'S SNAKEROOT [*Gentiana villosa* L.]  
47. SAMPSON'S SNAKEROOT [*Psoralea psoraliooides* (Walter) Cory]  
48. SASSAFRAS [*Sassafras albidum* (Nutt.) Nees]  
49. SMALL YELLOW LADIES-SLIPPER [*Cypripedium calceolus* L. var. *parviflorum* (Salisbury) Fern.]  
50. STRAWBERRY BUSH [*Euonymous americanus* L.]  
51. SWEET-FERN [*Comptonia peregrina* (L.) Coulter]  
52. SWEET GOLDENROD [*Solidago odora* Aiton]  
53. TOBACCO [*Nicotiana tabacum* L.]  
54. TURTLEHEAD [*Chelone glabra* L.]  
55. VIRGINIA SNAKEROOT [*Aristolochia serpentaria* L.]  
56. VIRGIN'S-BOWER [*Clematis virginiana* L.]  
57. WALKING-FERN [*Camptosorus rhizophylloides* (L.) Link]  
58. WAX-MYRTLE [*Myrica cerifera* L.]  
59. WHORLED-LEAF MILKWORT [*Polygala verticillata* L. var. *isocycla* Fernald]  
60. JOHN MARTYN (1699-1768). *Historiae plantarum rariorium*. 1728-1737.  
61. JOHN JACOB DILLENIUS (1684-1747). Copy of painting, Bodleian Library, Oxford.  
62. JOHN JACOB DILLENIUS. *Hortus elthamensis* Vol. 1. 1732.  
63. JOHN JACOB DILLENIUS. *Hortus elthamensis* Vol. 2. 1732.

64. MARK CATESBY (1682-1749). *The natural history of Carolina, Florida and the Bahama Islands.* Vol. 1. 1731-1732.
65. MARK CATESBY (1682-1749). *The natural history of Carolina, Florida and the Bahama Islands.* Vol. 2. 1734-1747.
66. CARL LINNAEUS (1707-1778). *Hortus cliffortianus.* 1738.
67. CARL LINNAEUS (1707-1778). *Species plantarum.* 1753.
68. CARL LINNAEUS. Engraving.
69. CURTIS' BOTANICAL MAGAZINE
70. CURTIS' BOTANICAL MAGAZINE
71. CURTIS' BOTANICAL MAGAZINE
72. CURTIS' BOTANICAL MAGAZINE

The National Agricultural Library wishes to thank the University of Oxford for permission to display 40 of their specimens of colonial Maryland plants. Documents were lent by the Maryland Hall of Records, with additional items loaned by the Hunt Institute for Botanical Documentation, Pittsburgh and the Smithsonian Institution, Washington, D.C. Special thanks are given to the University of Maryland, College Park Campus, for organizing the exhibit, and those organizations and individuals who have given their time and support to this project:

Behnke Nurseries  
Botanical Society of Washington  
Christ Church, Port Republic, Maryland  
Dr. and Mrs. M. L. Brown  
Dr. and Mrs. C. R. Gunn  
Historic Annapolis, Inc.  
Reliable Oil Company, Inc.

U.S. DEPT. OF AGRICULTURE  
NATIONAL AGRICULTURAL LIBRARY

OCT 13 1983





R0000 447113